# AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

1     1. (Currently Amended) A method for using query signatures to provide
2 security for a database, comprising:
3     initializing a signature cache, wherein initializing the signature cache
4 involves trapping database queries in a controlled environment, parsing the
5 database queries to produce a set of valid signatures, and storing the valid
6 signatures in the signature cache;
7     receiving a query at the database;
8     parsing the query at the database to determine a signature for the query,
9 wherein the signature specifies a structure based on operations for the query and is
10 independent of the value of literals in the query and wherein the signature is
11 constructed from structured query language (SQL) keywords of the query;
12     determining if the signature is located in a the signature cache, which
13 contains signatures for valid queries; and
14     if so, processing the query, otherwise, triggering a mismatch alert.

1     2. (Cancelled)

1     3. (Currently Amended) The method of claim 2 1, wherein the mismatch
2 alert throws an error.

1          4. (Currently Amended) The method of claim 2 1, wherein the mismatch

2   alert is sent to a database administrator and the query is processed.


1          5. (Currently Amended) The method of claim 2 1, wherein the mismatch

2   alert is sent to a requesting application, thereby allowing the requesting

3   application to take action.


1          6. (Cancelled)


1          7. (Original) The method of claim 1, wherein if the signature generates a

2   mismatch alert and if the query is a valid query, the method further comprises

3   allowing a database administrator to add the signature to the signature cache.


1          8. (Currently Amended) A computer-readable storage medium storing

2   instructions that when executed by a computer cause the computer to perform a

3   method for using query signatures to provide security for a database, wherein the

4   computer-readable storage medium includes magnetic and optical storage devices,

5   disk drives, magnetic tape, CDs (compact discs), and DVDs (digital versatile discs

6   or digital video discs), the method comprising:

7        initializing a signature cache, wherein initializing the signature cache

8   involves trapping database queries in a controlled environment, parsing the

9   database queries to produce a set of valid signatures, and storing the valid

10  signatures in the signature cache;

11        receiving a query at the database;

12        parsing the query at the database to determine a signature for the query,

13  wherein the signature specifies a structure based on operations for the query and is

14  independent of the value of literals in the query and wherein the signature is

15  constructed from structured query language (SQL) keywords of the query;

16           determining if the signature is located in a the signature cache, which

17     contains signatures for valid queries; and

18           if so, processing the query, otherwise, triggering a mismatch alert.


1          9. (Cancelled)


1          10. (Currently Amended) The computer-readable storage medium of claim

2     9 8, wherein the mismatch alert throws an error.


1          11. (Currently Amended) The computer-readable storage medium of claim

2     9 8, wherein the mismatch alert is sent to a database administrator and the query is

3     processed.


1          12. (Currently Amended) The computer-readable storage medium of claim

2     9 8, wherein the mismatch alert is sent to a requesting application, thereby

3     allowing the requesting application to take action.


1          13. (Cancelled)


1          14. (Original) The computer-readable storage medium of claim 8, wherein

2     if the signature generates a mismatch alert and if the query is a valid query, the

3     method further comprises allowing a database administrator to add the signature

4     to the signature cache.


1          15. (Currently Amended) An apparatus for using query signatures to

2     provide security for a database, comprising:

3          an initialization mechanism configured to initialize a signature cache,

4     wherein when initializing the signature cache, the mechanism is configured to trap

4

5     database queries in a controlled environment, parse the database queries to

6     produce a set of valid signatures, and store the valid signatures in the signature

7     cache:

8          a receiving mechanism configured to receive a query at the database;

9          a parsing mechanism configured to parse the query at the database to

10    determine a signature for the query, wherein the signature specifies a structure

11    based on operations for the query and is independent of the value of literals in the

12    query and wherein the signature is constructed from structured query language

13    (SQL) keywords of the query;

14         a matching mechanism configured to determine if the signature is located

15    in-a the signature cache, which contains signatures for valid queries; and

16         a processing mechanism configured to process the query if the signature is

17    located in the signature cache; and

18         an alerting mechanism configured to trigger a mismatch alert if the

19    signature is not located in the signature cache.


1     16. (Cancelled)


1     17. (Currently Amended) The apparatus of claim 16 15, wherein the

2     mismatch alert throws an error.


1     18. (Currently Amended) The apparatus of claim 16 15, wherein the

2     mismatch alert is sent to a database administrator and the query is processed.


1     19. (Currently Amended) The apparatus of claim 16 15, wherein the

2     mismatch alert is sent to a requesting application, thereby allowing the requesting

3     application to take action.

1        20. (Cancelled)

1        21. (Original) The apparatus of claim 15, further comprising an adding

2   mechanism configured to allow a database administrator to add the signature to

3   the signature cache if the signature generates a mismatch alert and if the query is a

4   valid query.